

What is claimed is:

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1. A cooling device for a heat source, comprising:  
a heat sink with a heat source arranged on an outer  
5 surface of said heat sink and a plurality of holes  
provided at a back surface of said heat sink;

a header arranged on a side of said holes arranged  
in said heat sink opposite to said heat source;

an inlet port at which a coolant flows into said  
10 header; and

an outlet port at which said coolant in said heat  
sink flows out.

2. A cooling device for a heat source, comprising:

15 (1) a heat sink including a coolant, said heat sink  
comprising:

(a) a first heat sink member with a heat source  
arranged at an outer surface of said heat sink; and

(b) a second heat sink member provided with a  
20 plurality of holes, said coolant that cools said heat  
source being made to pass through said holes;

(2) a header configured to an opposite side to said  
first heat sink member about said second heat sink member  
as axis;

(3) an inlet port whereby said coolant is made to flow into a first space surrounded by said header and said second heat sink member; and

(4) an outlet port whereby said coolant in a second  
5 space surrounded by said first heat sink member and second heat sink member is made to flow out.

3. The cooling device for a heat source according to claim 1,

10 wherein an upright plate is provided on a downstream side of said header.

4. The cooling device for a heat source according to claim 2,

15 wherein an upright plate provided on a downstream side of said header is made of arcuate shape such as to surround a hole.

20 5. The cooling device for a heat source according to claim 2 or claim 3,

wherein said upright plate provided on a downstream side of said header is provided offset from a center of said hole.

25 6. The cooling device for a heat source according to any of claim 1 to claim 4,

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wherein a gap between said upright plate provided on  
a downstream side of said header and a wall face on a  
side of said header opposite said holes is eliminated.

5 7. The cooling device for a heat source according to  
claim 1,

wherein a baffle plate is provided on an upstream  
side of said holes within said heat sink.

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10 8. The cooling device for a heat source according to  
claim 6,

wherein the baffle plate provided on an upstream  
side of said holes within said heat sink is made of  
arcuate shape such as to surround a hole.

15 9. The cooling device for a heat source according to  
claim 6 or claim 7,

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20 wherein a gap between said baffle plate provided on  
an upstream side of said holes within said heat sink and  
said wall face on a side of said heat sink opposite said  
holes is eliminated.

10. The cooling device for a heat source according  
to claim 1,

25 wherein an upright plate on a downstream side of  
said holes of said header and a baffle plate on an

upstream side of said holes within said heat sink are provided.

11. The cooling device for a heat source according  
5 to claim 9,

wherein said upright plate and said baffle plate respectively are made of arcuate shape such as to surround a hole.

12. The cooling device for a heat source according  
10 to claim 1,

wherein a porous fluid resistance is arranged between an upstream end of said header and said holes.

13. The cooling device for a heat source according  
15 to claim 1,

wherein a porous fluid resistance is arranged on an upstream side of said holes.

14. The cooling device for a heat source according  
20 to claim 1,

wherein a plurality of headers are arranged on a side of holes arranged in said heat sink opposite that of said heat source.

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15. The cooling device for a heat source according to claim 13,

wherein a flow path is provided whereby said coolant flowing out from said holes is returned to another header  
5 from within said heat sink.

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16. The cooling device for a heat source according to claim 1, wherein said cooling device is constructed divided into a part where said heat source is arranged, a  
10 part where said holes are arranged and a header part..

17. A cooling device for a heat source comprising:  
a header wherein one or a plurality of holes are respectively provided in a wall faces on both sides;

15 a heat sink outside wall where a heat source is arranged on an outer surface with gaps being provided on both sides of said header;

an inlet port whereby an coolant flows into said header; and

20 an outlet port whereby said coolant within said heat sink flows out.